

WHAT IS CLAIMED IS:

1. An active pixel image sensor comprised of a plurality of pixels, at least one pixel comprising
a photodetector,
a transistor,
a charge to voltage conversion region coupled to said photodetector and connected to the input of said transistor; and
a capacitor connected in parallel with the charge to voltage conversion region wherein the capacitor is designed to have a low voltage coefficient.
2. The device in claim 1, wherein said capacitor provides a capacitance independently of a voltage on said charge to voltage conversion node
3. The device in claim 1, wherein said capacitor comprises a polysilicon to polysilicon double plate capacitor
4. The device in claim 1, wherein said capacitor comprises a polysilicon to metal interconnect double plate capacitor
5. The device in claim 1, wherein said capacitor comprises a metal interconnect to metal interconnect double plate capacitor
6. An active pixel image sensor comprised of a plurality of pixels, at least one pixel comprising
a photodetector,
a transistor,
said photodetector also operating as a charge to voltage conversion region connected to the input of said transistor; and

a capacitor connected in parallel with photodetector wherein the capacitor is designed to have a low voltage coefficient

7. The device in claim 6, wherein said capacitor provides a capacitance independently of a voltage on said charge to voltage conversion node.

8. The device in claim 6, wherein said capacitor comprises a polysilicon to polysilicon double plate capacitor

9. The device in claim 6, wherein said capacitor comprises a polysilicon to metal interconnect double plate capacitor.

10. The device in claim 6, wherein said capacitor comprises a metal interconnect to metal interconnect double plate capacitor.

11. An active pixel image sensor comprised of a plurality of pixels, at least one pixel comprising
a photodetector,
a transistor,
a charge to voltage conversion region coupled to said photodetector and connected to the input of said transistor; and
wherein said transistor is configured to operate as a common source amplifier

12. An active pixel image sensor comprised of a plurality of pixels, at least one pixel comprising
a photodetector,
a transistor,
a charge to voltage conversion region coupled to said photodetector and connected to the input of said transistor.

wherein said transistor is configured to operate as a common source amplifier, and

a capacitor connected in parallel with the charge to voltage conversion region wherein the capacitor is designed to have a low voltage coefficient.